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**"Globalization: Munitions in the 21<sup>st</sup> Century"**

**Address of**

**The Under Secretary of Defense for Acquisition and Technology**

**Dr. Paul G. Kaminski**

**to the**

**ADPA Munitions Executive Summit**

**The Ritz-Carlton Hotel, Tysons Corner, VA**

**September 17, 1996**

**Good afternoon. It's a pleasure to be with you today. At the turn of this century, Theodore Roosevelt, a man known for his straight forward and direct style of talk, commented on America's place in the international arena. He said "We have learned that we cannot live alone at peace. Our own well being is dependent on the well being of other nations far away."**

**My own sense is that what was clear to Theodore Roosevelt at the start of the 20<sup>th</sup> Century is still true today as America prepares to enter the 21<sup>st</sup> Century. In every field—politics, economics, technology—we are living in an era of "rich possibilities." Our hopes are symbolized by the emergence of democracy around the globe, by the growth of new global trade relationships, by the expansion of global communications and by the explosion of information. In this era, the term "closed society" is rapidly becoming obsolete.**

**One does not need to look any further than beyond the front page of this morning's Washington Post to see how rich the possibilities are—a physician at Mount Vernon Hospital in Fairfax County was able to have a dictated patient medical summary transcribed within four hours. . . not by the hospital clerical staff in Virginia. . . but by a medical transcriptionist in Bangalore, India using high-speed data lines to throw first the voice recording and then the completed transcript half way around the globe!**

**But along with these rich new opportunities, there is a dark side of fears: the fear of the proliferation of weapons of mass destruction, the fear of ancient ethnic hatreds ripping apart multiethnic states, the fear of terrorism by extremist groups, and the fear of aggression by rogue**

nations freed from the constraints of their former Cold War alliances. The security of the United States continues to require us to maintain strong military forces to deter and if necessary, to defeat those who threaten our vital national interests.

## ARMAMENTS COOPERATION

I also believe that national security—ours and that of our friends and allies—now, and in the future, will increasingly rely on cooperation. The convergence of two trends—increasing likelihood of committing forces to coalition operations and reduced defense budgets—make the case for greater armaments cooperation with friends and allies. We are all being challenged to do more with fewer resources, and cooperation provides the needed leverage to deal with an uncertain international security environment.

Deploying forces in coalition operations with the forces of other countries places a high premium on interoperability—that is, ensuring that our systems are compatible and can be sustained through a common logistics support structure.

Bosnia and IFOR have made a difference in how we view interoperability with our friends. Even before IFOR, our Warsaw initiative was aimed at improving interoperability of command and control systems with the nations of central Europe. For years, the NATO countries have worked together to standardize and rationalize consumables, including certain classes of ammunition and munitions, to make common logistics a reality. IFOR demonstrated that this need was real.

Fundamentally, our command, control, communications, intelligence and logistics systems must be interoperable. Generally, we are achieving this in IFOR through setting common standards, in our supply coding system and our grading and classification of fuels for example. We are releasing hundreds of standards that provide the information necessary for manufacturing NATO standard equipment.

From an economic perspective, we also need to avoid the inclination to duplicate each other's capabilities. Instead, we need to think in terms of building on developed capability where possible. To do this, we need to better harmonize requirements from the start and increase the incentives for teaming of our industry—including removing the barriers to international teaming and barriers to commercial industry as well. We need to start doing this much earlier in the initial stages for our new programs.

In addition to the military and economic reasons I have just cited, the United States seeks cooperation with its friends and allies for political reasons as well—these programs help strengthen the connective tissue—the military and industrial relationships that bind our nations in a strong security relationship. The political dimension of armaments cooperation is becoming increasingly important in an uncertain international security environment.

## US MUNITIONS INDUSTRIAL BASE

**The U.S. Munitions Industrial Base is world class, competitive, and second to none—thanks in large part, to the efforts of many of the people in this room. Our challenge today is to develop and execute strategies for keeping the munitions sector healthy and competitive within the economic structure of a dynamic global environment. This means building on our strengths, such as military and commercial technologies, and integrating our products and markets with regional markets to achieve economies of scale, standardization, and interoperability.**

**Of course, some skeptics see international involvement as a threat to an already downsizing defense industry. They actively oppose opening any doors to international competition. This attitude is reflected in the tendency of some to sponsor "Buy America" provisions and other protectionist legislative initiatives. Others are sitting on the fence waiting to see if any cooperative opportunities will arise. Finally, some see opportunity now and are actively seeking work in the international community.**

**Those who are fence sitting are non players. In this world, you are either moving ahead or falling behind. Sitting on the fence means falling behind. Then there are those who are proactive and tend to see opportunity many places. I might add that there are quite a few of you in this audience today. A number of you are forming partnerships with our Allies and still more are working with organizations in the former Soviet Union.**

**You are all acutely aware that the Department's procurement of munitions has dropped precipitously in the last five years, creating a significant reduction and restructuring of the munitions industrial base. It's a tough business—and it reminds me of an analogy that I think Norm Augustine used to describe the new defense business environment . Using a ranching analogy, he said "a cow would have to graze at 60 miles per hour just to maintain it's weight."**

**We have three million tons of conventional ammunition in our munitions stockpile. Some would say it's hard to justify increased spending in this area when there are so many other acquisition issues demanding increased resources. The Department, however, is focusing on a number of munitions activities designed to further enhance the effectiveness of our military forces. Starting in fiscal 1998, the plan is to reverse the current downward trend in procurement spending and embark on a program of force modernization. This includes modest increases in munitions procurement as well.**

## MUNITIONS INITIATIVES

**The Department is moving forward on a number of initiatives to ensure that our munitions are interoperable, cost-effective, and rapidly developed, produced, and fielded. Today I would like to address seven major components of the DoD munitions program that, I believe, are growth areas and may also offer opportunities for expanded collaboration.**

## **Selective Revolutionary Modernization**

**The first component is what I would call "selective revolutionary modernization." It is being pursued in those cases where new technologies provide a new revolutionary capability against a target or class of targets.**

**One example would be developmental activities to defeat deeply buried targets. This class of targets has become more of a problem to our planners because of the success we have enjoyed in employing precision strike weapons—our demonstrated capabilities have caused potential adversaries to harden their high value, fixed assets. To counter this, we are pursuing technologies like void sensing fuzes that will allow a penetrating warhead to be programmed to detonate in a specific room in a deeply buried target.**

**Other examples of revolutionary modernization include the Brilliant Anti-Armor Submunition and miniature munitions technologies aimed at increasing the lethality of a 250 lb. bomb to that of a current 2,000 lb. class weapon. Revolutionary modernization provides limited numbers of "must have" high-end weapons for dealing with special target classes. These systems, in turn, leverage the large number of munitions in our low-end inventories.**

## **Modular Improvements to Existing Munitions**

**The next element of our overall strategy is making modular improvements to enhance the effectiveness of the existing inventory. As I mentioned before, we have a tremendous conventional munitions stockpile—in both precision guided and unguided munitions. Many of these existing munitions require improvements to enhance reliability, safety, life-cycle cost, and lethality. The challenge is to introduce these improvements sensibly and affordably.**

**The accuracy of our precision-guided munitions is good enough when it takes only two or three weapons to hit an aim point. Our weapons focus now is to preserve this accuracy while reducing cost, increasing standoff range, and providing all-weather capability. One other objective is to improve operational flexibility, employment and planning. These are the major imperatives behind our development of systems like the all-weather Joint Direct Attack Munition (JDAM), the Wind Corrected Tactical Munitions Dispenser, the Joint Standoff Weapon (JSOW), the Extended Range Guided Munition and the Joint Advanced Standoff Strike Missile (JASSM).**

**Another example of a modular improvement is our program to provide an affordable self-destruct fuze for submunition warheads. This new fuze will enhance reliability and also provide a self destruct capability for eliminating the problem of unexploded ordnance on the battlefield.**

## **Non-Lethal Weapons**

**A third component of our munitions strategy is equipping our forces with non-lethal weapons to conduct Operations Other Than War in which the focus is on reduced collateral casualties. The need for non-lethal capabilities is a direct result of changes in the global threat environment that I spoke of earlier.**

**I have designated the Commandant of the Marine Corps as Executive Agent for the Department's Non-Lethal Weapons program. Both the Army and Marine Corps have a strong role to play in executing this program. The objective is to provide another tool for our deployed forces to use in carrying out the missions assigned.**

**I would like to stress that we are not contemplating a "Non-Lethal Force." Non-lethal weapons supplement but do not replace lethal weapons. In fact, analyses of different scenarios across the spectrum of conflict suggest—in each case—that a force equipped with a mix of lethal and non-lethal weapons is superior to a force with lethal weapons alone.**

## **Conventional Munitions Demilitarization**

**The fourth element of our overall strategy is conventional munitions demilitarization. As the services downsize and older weapons become obsolete, unserviceable or unusable ammunition items migrate to the demilitarization stockpile. Earlier, I mentioned that we had an existing three million ton stockpile. Of this stockpile, over 400 thousand tons are no longer of any use and require demilitarization, and I am informed that this may grow by another 400 thousand tons within the next three years.**

**The need for an expanded demilitarization program is being driven by several additional factors, including accelerated closure of overseas bases, the fact that our CONUS-based munitions storage areas are at maximum capacity, and the Base Realignment and Closure actions that are closing three more storage depots. In recent years, the Department has been increasing the use of commercial contractors to augment organic demilitarization capabilities.**

**In the global context, large quantities of old and unserviceable munitions are stockpiled in many locations throughout the former Soviet Union and Warsaw Pact nations. The international munitions industrial base produced those munitions and is best qualified to demilitarize these munitions. Already, a number of firms represented here today have teamed up with overseas partners to attack this problem and make a profit in the process.**

**We anticipate that environmental restrictions will be used to increasingly curtail our primary method of demilitarization—open burning and open detonation. In response to this environmental**

concern, the Department has initiated a new \$15 million per year DEMIL R&D program to investigate and develop new environmentally compliant demilitarization technologies.

The priority we attach to the DEMIL program is reflected in the increase in annual funding for DEMIL execution. In fiscal 1995, the DEMIL budget was \$35 million. It is now at the \$100 million per year level over the fiscal 1997 to 2001 future years defense program. DEMIL enjoys a high priority because it reduces the stockpile and makes room for new, improved munitions.

### **Training Munitions**

Training munition availability is a fifth element of the Department's munitions program. DoD is committed to maintaining a high degree of readiness—that means maintaining proficiency through training.

As you may know, many of our war reserve munitions cannot be used for training because they clutter our training areas with unexploded ordnance or contaminate these areas with heavy metals. If we are committed to maintaining our readiness, then we must also be committed to the annual procurement of 'training unique' ammunition. For this reason, the Department's annual training munitions procurement requirement now exceeds \$1 billion per year.

We need your good ideas on alternative lower cost training ammunition. This requirement will continue regardless of the status of the conventional munitions stockpile.

### **Insensitive Munitions**

Insensitive munitions are yet another important component of DoD's munitions program. Insensitive munitions are an idea whose time has come. In the past, there were concerns about the lethality and reduced effectiveness of insensitive munitions—much of this concern originated from attempts to "back fit" highly optimized TNT-based warheads with different, and in some cases, less energetic explosive fills. This concern is less valid today. Effectiveness does not necessarily have to be traded for insensitivity when better chemical formulations—like certain PBX-based explosives (plastic bonded explosives)—are available or when insensitivity along with performance are optimized together in the system design. The issues today are now primarily stockpile vulnerability and cost.

Insensitive munitions are important to the DoD for many reasons. First, and foremost, the Navy's high value platforms—their surface combatants and attack submarines—have always been vulnerable to sensitive explosives. Second, joint operations have exacerbated this problem by increasing the likelihood that munitions from other services would find their way aboard Navy ships or at consolidated storage sites. And third, we are consolidating our munitions stockpile at fewer locations in the US—some of those locations are now quite close to large population centers

**due to development over the years.**

**As we move toward lower numbers of high-value munitions, we are finding that we are incurring a greater vulnerability to the loss of a complete strike capability—either within theater or globally—through attack or an accident at a single storage site.**

#### **Alternatives to Anti-Personnel Landmines**

**The seventh and final area that I would like to comment on today is the President's newly issued policy on Anti-Personnel Landmines. This policy is designed to ultimately ban the production, use, transfer, and stockpiling of Anti-Personnel Landmines. On June 17, 1996, Secretary Perry further directed that the Department begin research and development of promising technologies as alternatives to anti-personnel landmines.**

**We are in the process of looking at man-in-the-loop command detonated approaches that might provide US forces with the capability to accomplish the missions for which anti-personnel landmines had been previously used. I might add that certain non-lethal technologies may have potential application here in Operations Other Than War. There is also an impact in the DEMIL area since the new landmine policy requires the elimination of all non-self-destructing anti-personnel landmines.**

**There is another related aspect of the landmine policy that doesn't directly impact the effectiveness of military forces. It does, however, have global implications. The President has directed the Secretary of Defense to undertake a substantial program to enhance our mine detection and clearing capabilities. This includes efforts to significantly expand our contribution to humanitarian demining.**

**We are just beginning to formulate a program to implement this direction. In a global context, this is a tremendous problem. I consider deployed anti-personnel landmines to be one class of unexploded ordnance. There are over 200 million landmines deployed in over 30 different countries, and if you consider the vast number of other types of unexploded ordnance in the world you understand the enormity of the overall problem. Based on the size of the problem, it clearly represents a lucrative area for industrial collaboration for years to come.**

#### **SUMMARY**

**In summary, it is clear that we encounter some difficult challenges as well as some significant opportunities as we enter the next century. Our forces are more likely to be committed to coalition operations. In this environment, interoperability and common logistics support will be important objectives.**

Armaments cooperation with our friends and allies will help us achieve those objectives. It will also open global markets and provide new competitive challenges. . . our munitions industry is well positioned to operate in this global arena.

I've identified seven areas of the DoD munitions program where I believe there is growth potential—both in the US and with our friends and allies.

Something we call "selective revolutionary modernization" will provide the high-end systems needed to successfully engage new classes of high value, hardened targets.

Modular improvements to existing munitions will leverage our substantial investment in existing inventories.

Non-Lethal Weapons will give our forces superior capability across the spectrum of conflict.

Conventional munitions demilitarization will reduce the unneeded portion of our stockpile and make room for modern munitions.

Low cost training munitions will help allow our forces to affordably maintain readiness.

Insensitive munitions will reduce the vulnerability of our stockpiles and high value platforms to unplanned stimuli.

And alternatives to anti-personnel landmines are intended to provide US forces with an affordable substitute capability for area control.

These seven areas are certainly not our whole conventional munitions program—other development and procurement activities are forecast as well. I look forward to working with you as we proceed to equip and sustain US forces in the years ahead.